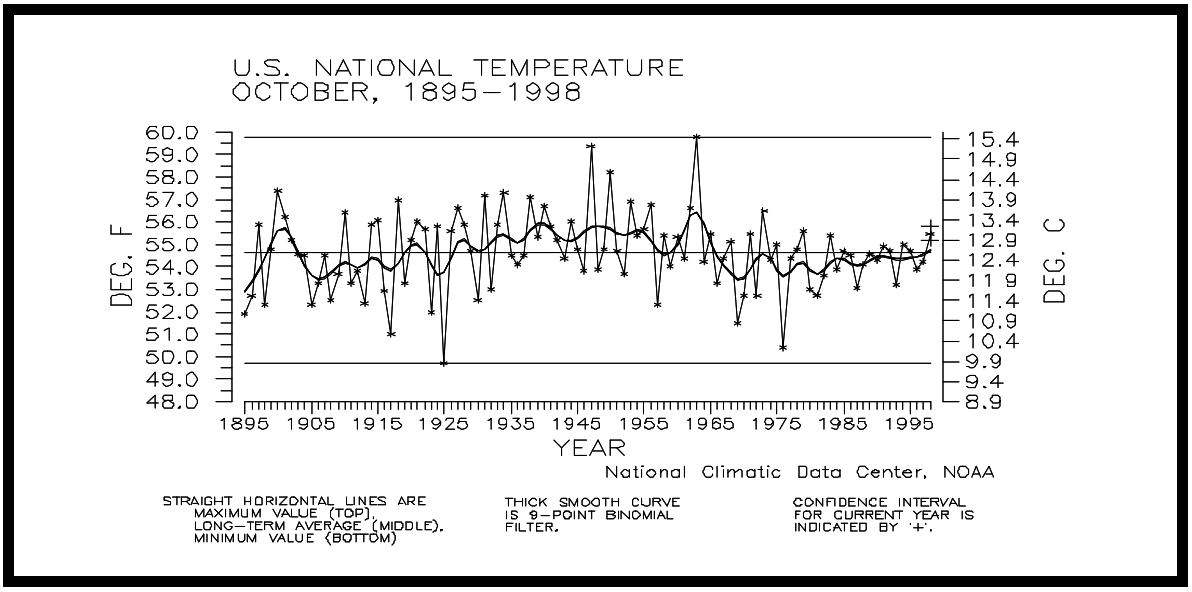
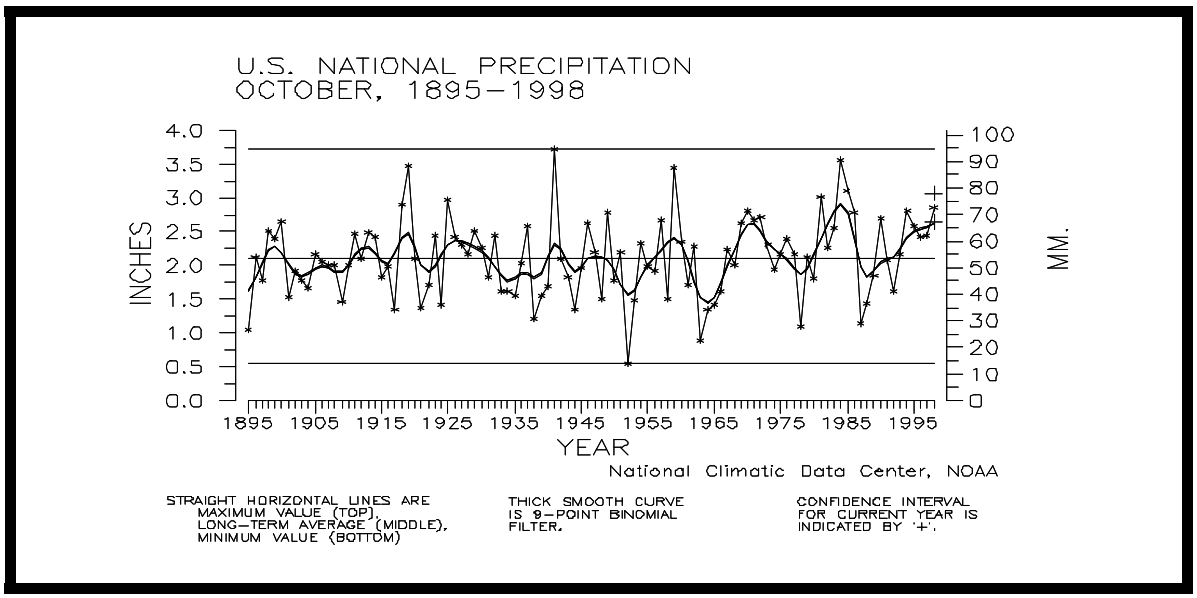
Monthly Activity Report

October 1998





Preliminary data for October 1998 indicate that temperature averaged across the contiguous U.S. was above the long-term mean, ranking as the 32nd warmest October since 1895 (Top Figure). Less than one percent of the country was much warmer than normal while nearly zero percent of the country was much cooler than normal.

October 1998 was the ninth wettest such month since 1895 (Bottom Figure) based upon preliminary data. Nearly 24 percent of the country experienced much wetter than normal conditions, while about two percent of the country was much drier than normal.

DIRECTOR'S HIGHLIGHTS

New Mission Support Contract

October 1 marked the beginning of the new Mission Support Services Contract, awarded to Orkand Corporation. Thirteen service areas comprise the new contract: support in computer operations, filling customer orders, photo processing, data entry, copy, mail, and archival services are some of the major service areas. Use of document imaging technology of selected incoming records is a new requirement. The contractor presented features of the new services to management, and proposed new "innovation" possibilities for future consideration.

Vice President's CD-ROM

The National Climatic Data Center's Mike Changery briefed the staff of the National Oceanic and Atmospheric Administration's Public Affairs Office, and the White House Office of Science Technology Policy, on the functionality and operation of a beta test copy of the "Probabilities of Temperature Extremes in the U.S.A." CD-ROM being developed for the National Climate Assessment. The CD enables a user to determine the change in probability of occurrence of extreme temperatures at over 300 locations in the U.S., by either a user input change in climate or by using changes predicted by various climate models.

NOAAPORT Antenna Installed

The NOAAPORT antenna was installed on the roof of the Federal Building at the National Climatic Data Center (NCDC) during the week of October 19-23. The signal cable carrying data from all four NOAAPORT channels is positioned in the computer room ready for connection to the NOAAPORT Receive System (NRS). The NRS is the computer system required to receive and decode the satellite signal into usable data formats. The National Weather Service (NWS) estimates that the NRS will be installed at NCDC in December or January. In the interim, PRC Inc., the contractor that installs the NRS, has sent some equipment that will be used to demodulate the satellite signal and transfer it to NCDC's Local Area Network.

CLIMATE DATA AND INFORMATION SERVICES

✦ Data Base Development

NNDC Server System Development

Major progress towards the central visual interface to the NOAA National Data Centers (NNDC) Server was accomplished this past month. The NNDC team collaborated with the U.S. Geological Survey (USGS) National Atlas team and saved significant development time by changing the USGS Web Geographic Information System (GIS) interface from a U.S. scaled interface to a global scaled GIS tool. This GIS interface, the other NNDC team accomplishments, a proposed budget and a delivery schedule were presented to Dr. Susan Zevin of the National Environmental

Satellite, Data, and Information Services and the Data Center Directors by Dan Manns of the National Climatic Data Center and Ted Habermann of the National Geophysical Data Center. This interface allows users to manipulate a global map, overlay data set station locations, other environmentally related information and select data sets to display.

✦ Data and Information Distribution

On-line Increases in Data Sales

The new fiscal year began with steady increases in on-line contacts. Internet access increased by approximately 12 percent, and data sales indicate a definite trend toward digital products. There was a 17 percent revenue increase for on-line data and an 11 percent increase in on-line orders. Orders for on-line subscriptions account for 25 percent of the on-line data sales

Billion Dollar Weather Disasters Update

The National Climatic Data Center (NCDC) has updated its on-line report on billion dollar weather disasters of 1980-1998. Four events were added to the report, including one from 1990, when torrential rains produced extensive flooding along the Trinity, Red, and Arkansas Rivers, causing over $1.0 billion in damages and 13 deaths. Three events were added for 1998: 1.) Hurricane Georges in September which caused an estimated $3.0-$4.0 billion in damages and 16 deaths as it tracked across Puerto Rico, the Florida Keys, and the Gulf coasts of Louisiana, Mississippi, Alabama, and Florida; 2.) Hurricane Bonnie in August, which hit eastern North Carolina and Virginia, causing approximately $1.0 billion in damages and 2 deaths; and 3.) the Southern drought/heat wave during the summer of 1998 which caused over $6.0 billion in damages and at least 200 deaths from Texas/Oklahoma eastward to the Carolinas. This report is available through NCDC's central site for extremes and events, and includes links to detailed reports pertaining to each billion dollar event.

Rescuing Historical Data, the Scanning Continues

The conversion of paper records containing surface weather observations to digital images continues at full production. To date, the National Climatic Data Center (NCDC) has shipped 19,856 boxes of records to the West Virginia contractor. NCDC has received back 737 CD-ROMs containing some 5.4 million images. The quality assurance process has completed 549 CDs and the NCDC quality review process has completed 506 CDs. The imaging work is at approximately the half-way point of the current contract.

NEXRAD Build 10 Beta Test

The National Climatic Data Center (NCDC) participated in the National Weather Service (NWS) Operational Support Facility (OSF) Beta test of Build 10 software to be installed at Weather Surveillance Radar - 1988 Doppler (WSR-88D) Radar sites. Two main upgrades in Build 10 are the addition of adaptable parameters on the 8mm tapes and a modification to improve the ability of the field-site hardware to accept and record on recycled 8mm tapes. NCDC examined the 8mm tapes and optical disks recorded at Raleigh, NC, and Wakefield (Norfolk), VA, during the test period and reported the results to NWS Headquarters, the OSF and other Beta Test participants during a conference call on October 23. The participants agreed that Build 10 was fully functional and should be released to the field sites beginning in November.

NEXRAD Level III Data Transfer to HDSS

The National Climatic Data Center (NCDC) has been operating two PC-optical disk systems to transfer Next Generation Weather Radar (NEXRAD) Level III data to the NCDC Hierarchical Data Storage System (HDSS). This transfer is required to make the Level III data readily available in digital form to users and to

fulfill a 1999 Environmental Sciences Data Information Management (ESDIM) proposal. Orkand Corporation and NCDC attempted to install 100mb/sec cards in one of the PCs to speed the transfer of data. In short, the optical disk drive must operate in DOS mode and the 100mb/sec card must operate in Windows 95. When the original system configuration was reinstalled, the disk drive could not be brought back into operation. Orkand Corporation has been unable to get the disk drive to be recognized by the PC. NCDC may have to call in a specialist. NCDC will require four such systems in operation to keep up with the incoming Level III data and slowly complete the backlogged disks. NCDC cannot fulfill their obligation to ESDIM or their users without these systems.

✦ Satellite Data Requests

Satellite Imagery Used in Television Detective Series

The National Climatic Data Center (NCDC) provided infrared GOES 6 satellite images from September 1984 to a medical detective television series for use in one of their episodes. The images proved the existence of thunderstorms on the north side of Tucson, AZ, during a particular night when a murder was supposed to have taken place. The satellite imagery became particularly important as nearly all surface-based observations failed to indicate precipitation had occurred. The television series intends to broadcast the color-enhanced infrared images to demonstrate how the time-frame when the crime could have happened is narrowed.

Interest on the "Perfect Storm" Continues

Of all the great extra tropical storms that have impacted the U.S. over the last seven years, none has garnered more media attention than the Perfect Storm of October 27 - November 1, 1991. The recent flurry of media attention probably was spurred by Sebastian Junger's novel, "The Perfect Storm." The latest requester is the Historical Channel, a cable-based program dedicated to educational topics, which recently contacted the National Climatic Data Center (NCDC) for satellite images of the event. Personnel at the Historical Channel were pleased to know that over a dozen images of the evolving storm are on-line at NCDC's Web site along with a two-page narrative found under NCDC's Satellite's Eye Art Gallery. Possible arrangements to make a high quality satellite movie are being considered.

✦ Congressional Requests

Senator's Office Requests Marine Data for Ferry Feasibility Study

The National Climatic Data Center (NCDC) provided Massachusetts Senator John Kerry's office with marine climatology information for a ferry feasibility study. Researchers from the Senator's office are studying the feasibility of operating a ferry between Massachusetts and Nova Scotia, and are concerned with average and extreme conditions for visibility, winds, waves, and ocean water temperatures. They received charts and graphs covering mean and extreme conditions for cloud cover, precipitation, visibility, wind and wind rose information, mean air and sea temperatures, and wave height frequencies. This information will be used in determining what time of the year may be the most climatologically favorable to conduct the proposed ferry operations.

✦ Requests from News Media

"USA Today"

In addition to the regular monthly national climatic recaps published by "USA Today" on its weather page, they are now running occasional state climatic profiles (e.g., Texas, October 1, 1998). In addition to general background climatology, they also include long-term extremes. The source, the National Climatic Data Center, is acknowledged. Most of the material used is either a part of the National Oceanic and Atmospheric Administration climate monitoring for extremes, or a part of the

Climate Variations Bulletin. "USA Today" also posts to the Web.

Flood Information Provided to "The Learning Channel"

The National Climatic Data Center (NCDC) provided historical flood information and statistics for the U.S. to a television producer working on a program concerning flooding. The program, entitled "Nature's Wrath," will feature information showing the fury of actual flooding events. Six inches of fast-moving flood water can cause a person to fall, and flood waters only 2 feet deep are enough to float a car. In the U.S., an average of 146 flood-related deaths occur each year compared to annual totals of 80 deaths for lightning, 69 for tornadoes, and 17 for hurricanes.

Warm September

National Climatic Data Center Meteorologist William Brown granted a tape-delayed radio interview with Mr. Steven Pomplun of the Institute for Environmental Studies at the University of Wisconsin. The topic of discussion was the record heat experienced by the contiguous U.S. during September, and the near-record heat experienced by the country for the year-to-date. Based upon preliminary data, September 1998 was the warmest such month on record for the U.S., surpassing by 0.70 degrees F., September 1931. With an average temperature of 57.6 degrees F., the January-September period is the second warmest such nine-month period on record. The warmest such nine-month period on record is January-September 1934, with an average temperature of 57.7 degrees F. The interview will be syndicated and available to nearly 150 radio stations across the country.

✦ Technology Applications

Climate Atlas Update

The National Climatic Data Center (NCDC) completed its preparation of all the data files requested by Oregon State University (OSU) for Phase 2 of the U.S. Climate Atlas project. The data set consists of over 60 different files including files from NCDC's snow climatology, Global Normals (first order dew point and relative humidity), and Clim81 (temperature and precipitation normals) data sets. In addition, NCDC personnel computed statistics for several other parameters and for many supplemental stations (i.e., stations that did not meet the criteria for inclusion in the normals) using the surface hourly and daily databases. More than 43 mbytes of summary statistics were ftp'd to OSU**.** OSU has completed preliminary ARC/INFO ASCII grid files for some of the Phase 2 products for NCDC to review. NCDC also received a set of CD-ROMs from the U.S. Department of Agriculture's Natural Resource Conservation Service which contain monthly and annual U.S. precipitation maps that were developed using PRISM (Parameter Regressions on Independent Slopes Model). The CD-ROMs contain the maptool ArcExplorer which NCDC is considering for use with the CD-ROM version of the Climate Atlas. ArcExplorer is freeware that provides easy to use GIS (Geographic Information System) tools for viewing and exploring maps. Work on the Atlas project has been slowed due to the allocation of resources to the Y2K/migration project.

International Satellite Cloud Climatology Project (ISCCP) Catalog

The National Climatic Data Center generated a CD-ROM which contains the September 1998 version of *The ISCCP Catalog of Data and Products*. This CD-ROM mirrors the Web site at http://www2.ncdc.noaa.gov/docs/isccp/ This disc is arranged as a series of HTML files that are linked to each other through the Welcome page.

✦ Regional Climate Centers

Regional Climate Center Activities

The Regional Climate Center (RCC) program received good news during the month. The FY99 funding for the program was increased. The

development of a full Customer Service Plan is now underway. The goal is to have the customer service functions of the National Climatic Data Center (NCDC) and the RCCs be fully integrated within three years. Plans are being made to conduct a full review of the State Climatologist Program. Initial thoughts are to include several state climatologists and RCC staff in this review. The goal is to have this review completed by March 1999.

SCIENTIFIC AND PROFESSIONAL ACTIVITIES

✦ Working Groups/ Committees/Meetings

NASA/NOAA Long Term Archive

National Climatic Data Center personnel attended a Long Term Archive Data Requirements workshop in Boulder, CO. The workshop was sponsored by U.S. Global Change Research Program and hosted by the National Aeronautics and Space Administration (NASA) and the National Oceanic and Atmospheric Administration. Representatives from the science community discussed archive and service requirements for future NASA Earth System Enterprise satellite data. The input will be used as part of the FY01 funding initiative.

American Bar Association Meeting

Robert Quayle, of the National Climatic Data Center (NCDC), joined the National Oceanic and Atmospheric Administration General Counsel Director at a meeting of the American Bar Association's Section on Natural Resources, Energy, and Environmental Law at Hilton Head, SC, October 8-9. The topic was Policy and Politics of Climate Change, and Mr. Quayle gave a briefing on recent developments in climate monitoring.

Climate Change Overview

The National Climatic Data Center's (NCDC) Tom Peterson presented an overview of observed climate change and model projections and chaired a session on observed climate change at the Second International Specialty Conference on Global Climate Change Science, Policy, and Mitigation/Adaptation Strategies in Crystal City, VA, in October. Most of those attending the conference were not climatologists but were representatives of industry, environmental groups, economists, biologists, epidemiologists, and social and political scientists dealing with climate change related issues often on a policy decision level, so it was important for them to get a clear understanding of the current state of our observations. The meeting was sponsored by the Air and Waste Management Association and several organizations, including NCDC.

Ice Load Committee Meeting

On October 19-20, Neal Lott of the National Climatic Data Center attended the fall meeting of the American Society of Civil Engineers (ASCE) Ice Load Committee at the U.S. Army Cold Regions Research and Engineering Laboratory (CRREL) in Hanover, NH. The committee recently completed the ASCE7-98 publication, with a revised ice loads map (50-year recurrence) for the U.S. The new map provides detailed guidelines for over half the continental U.S., based on modeling of freezing rain data. Such an analysis has never been available to structural design engineers before, and will be used extensively by the communications and utilities industries. The next publication (ASCE7-01) should complete the map

for the entire U.S., and this meeting focused on plans for completion of the map. Other topics include possible use of various return periods other than the baseline 50 years, load combinations (e.g., snow and ice), and designs for rime and snow loads.

NCDC Represented at NASA DAAC Meeting

Sam McCown of the National Climatic Data Center (NCDC) was NCDC's representative at the National Aeronautics and Space Administration (NASA) Distributed Active Archive Center's (DAAC) User Services Working Group semiannual meeting, held October 20 - 22, 1998, at Langley Research Center in Hampton, VA. Primary topics discussed included VO interoperability, the Committee on Earth Observation Satellite's Catalogue Interoperability Experiment (CINTEX), educational outreach issues, and formatting for databases. As part of a series of presentations from each DAAC or Associated Data Centers, Sam provided information on changes in formats and instruments on NOAA 15 and GOES-10, and he supplied information on NOAA/NASA user service issues.

NOAA/NESDIS Satellite Conference

National Climatic Data Center (NCDC) Meteorologist Tom Ross was an invited speaker at the National Oceanic and Atmospheric Administration (NOAA)/National Environmental Satellite, Data, and Information Service (NESDIS) "Satellites in Our Everyday World" conference held in Seattle, WA, October 30 - 31, 1998. NOAA also had an exhibit at the National Science Teachers Association convention which overlapped with the satellite conference. The conference gave educators a broad overview of satellite applications so they have a better understanding of how satellite data are used in a variety of disciplines (e.g., meteorology, agriculture, forestry, fisheries, oceanography, etc.). Mr. Ross's presentation was entitled "Educational Resources and Applications Available Using the National Climatic Data Center's World Wide Web Site."

Customer Order Management Processing System (COMPS)

An upgraded version of COMPS, Build 2.0.3, was delivered during the month of October. Training was provided for all contract personnel who will use this system. Several National Climatic Data Center (NCDC) users are entering orders into the COMPS system. Fiscal personnel continue to enter National Oceanographic Data Center (NODC) payments into the COMPS system, in addition to testing and transitioning to this upgraded version of the software. COMPS Product Catalog Administrators are nearing completion of entering all products into Product Catalog tables.

Climate and Health

Robert Quayle of the National Climatic Data Center attended a workshop at AAAS in Washington, D.C., October 27-29, 1998, to help establish a research agenda to address knowledge gaps in the health effects of climate change, with emphasis on UV and heat-related illnesses. A prior workshop had addressed infectious diseases. The session was chaired by Robert M. White, and speakers included the President of the Institutes for Medicine, several medical researchers, Richard Sommerville of Scripps (on climate models) and Mr. Quayle on the observed climate record and projections of temperature extremes. A report will highlight areas where interdisciplinary research is needed, and the need for mechanisms to promote interagency and public-private partnerships to conduct the research.

✦ Visitors

SRCC Visitor

Dave Barthel, of the Southeast Regional Climate Center (SRCC), visited the National Climatic Data Center on October 15-16, 1998, for Unified

Climate Access Network (UCAN) Project Metadata database development work.

Idaho State Climatologist Visits NCDC

Myron Molnau, Idaho State Climatologist, visited the National Climatic Data Center (NCDC) October 28-30, 1998, for station history historical data collection research.

✦ Publications

Paper Presented at Symposium

A paper titled "A Multi-Sensor Assessment of Urban Heat-Islands: A Case Study," by Kevin Gallo, of the Office of Research and Applications; Timothy Owen, of the National Climatic Data Center; K. Baugh of the University of Colorado; and C. Elvidge, of the National Geophysical Data Center, was presented by K. Baugh at an International Symposium on Resource and Environmental Monitoring: Local, Regional, Global, held in Budapest, Hungary, September 1-4, 1998. The paper discussed the usefulness of a blended sensor analysis of urban heat-islands that included data from the NOAA-AVHRR, Defense Meteorological Satellite Program - Operational Linescan System, and Landsat Multi Spectral Scanner.

EMPLOYEE ACTIVITIES

✦ EEO and Community Outreach

United Way - CFC

Ryan Nelson, of the National Climatic Data Center (NCDC), chaired the Combined Federal Campaign (CFC) kickoff meeting and Karol Pittman of NCDC serves as a member of the Local Federal Coordinating Committee. The committee's purpose is to ensure adherence to Office of Personnel Management guidelines and assist CFC chairpersons in directing the campaign.

✦ Training

Job Control Language Course Attended

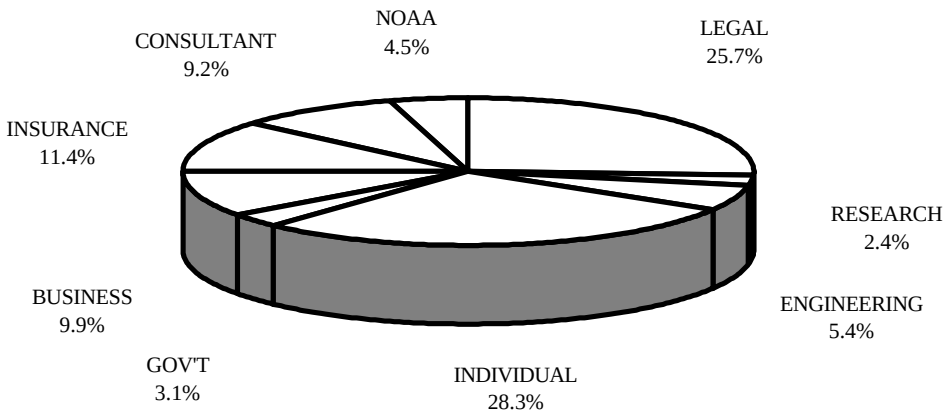
Dan Poltar, of the National Climatic Data Center, attended a Job Control Language course given in Vienna, VA, October 27 - 29.

DCE Training

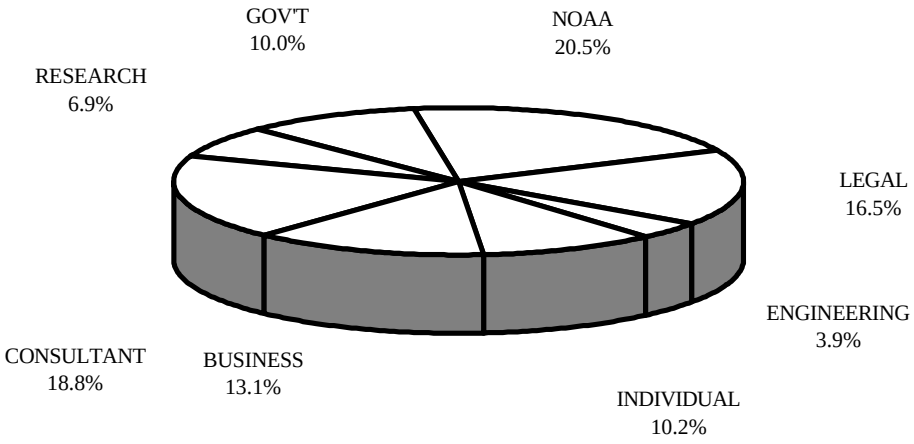
Jody Klein, of the National Climatic Data Center, attended the Distributed Computing Environment (DCE) training held in Houston, TX, at the IBM training facility. The DCE architecture is used in the SP2 system to support the new storage management system HPSS.

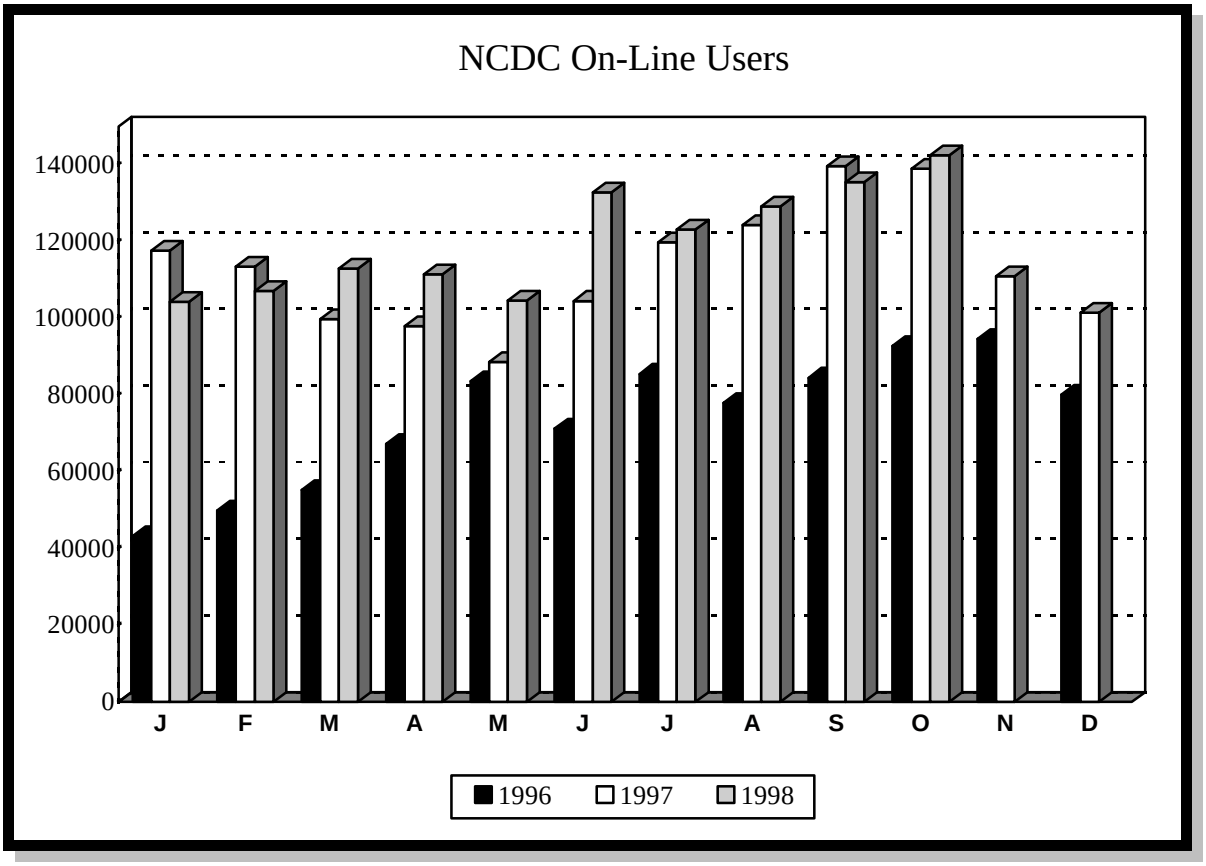
The following charts and graphs show the latest National Climatic Data Center user and data statistics.

Customer Profile Based on Orders



Customer Profile Based on Order Cost

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40000
20000
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J F M A M J J A S O N D
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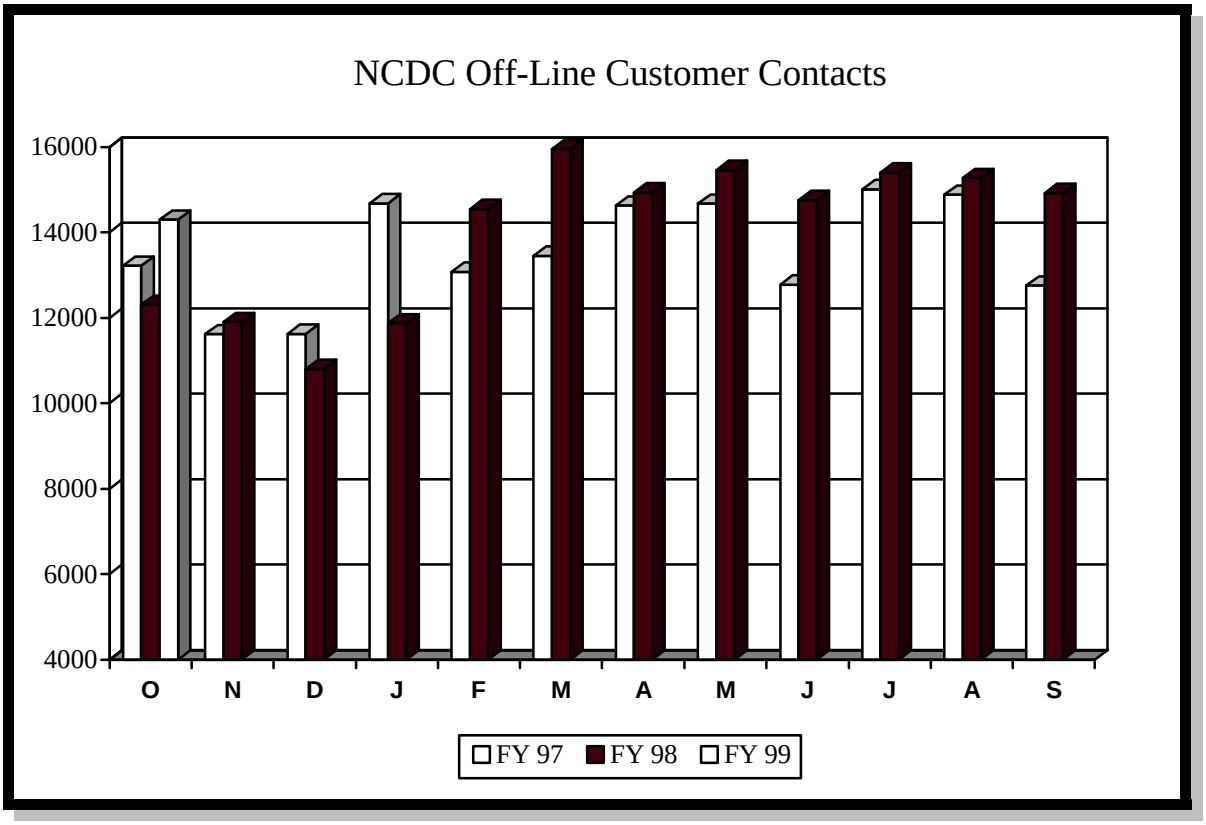
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8000
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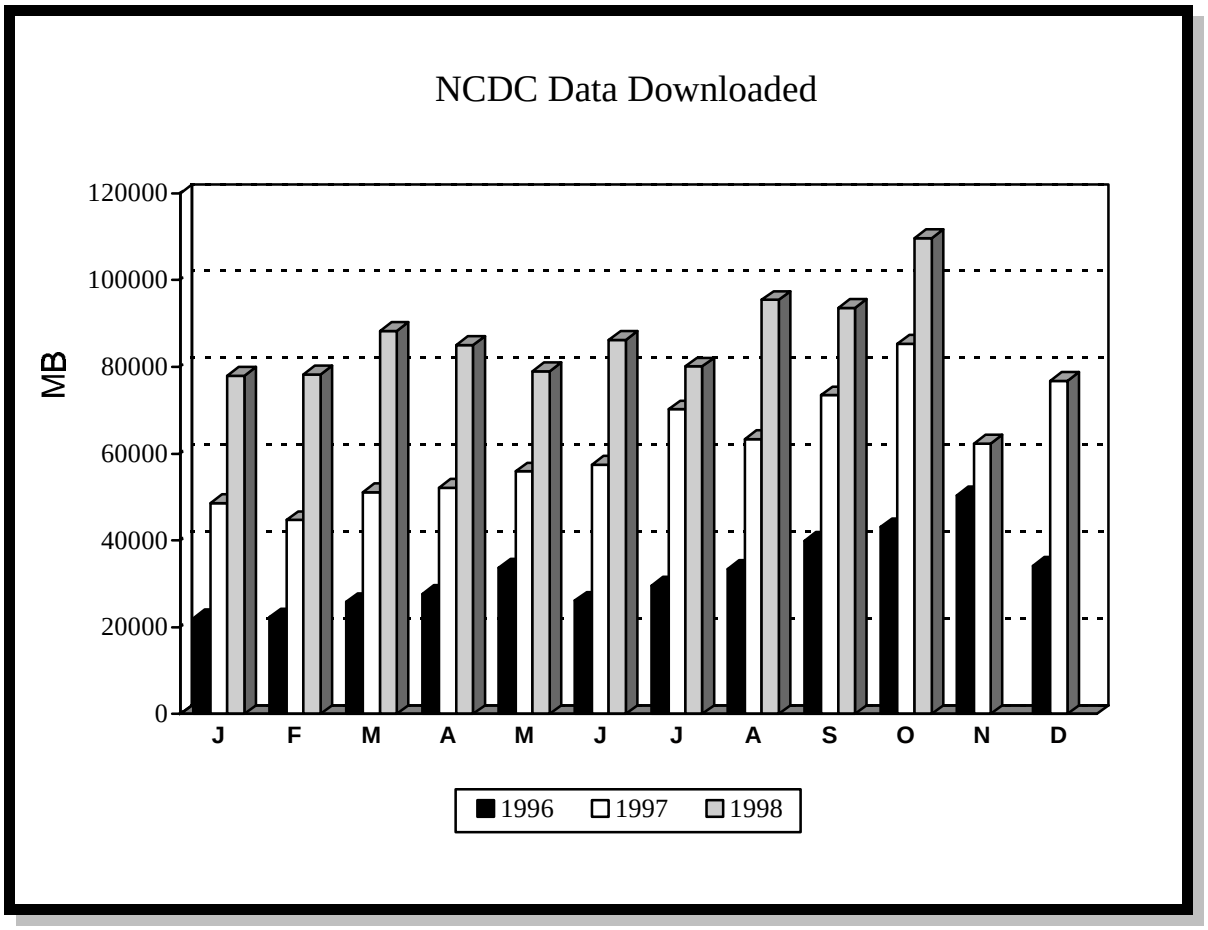
4000
O N D J F M A M J J A S
FY 97 FY 98 FY 99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O
N
D
1996
1997
1998